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COURT OF APPEALS OF THE STATE OF
WASHINGTON
DIVISION II

LEVI MYHRE, a minor, by and through his Guardian *ad*
Litem, WILLIAM L.E. DUSSAULT,

Appellant,

v.

LAURA HAMILTON, individually and her marital
community; LAURA HAMILTON LICENSED
MIDWIFE, a Washington business, et al.,

Respondents.

APPELLANT'S BRIEF

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I..INTRODUCTION

Levi Myhre was horrendously injured at birth by the incompetent conduct of a midwife, Laura Hamilton, who literally yanked Levi from his mother's womb.

When Levi filed suit against Hamilton from her professional negligence, the trial court initially rejected Hamilton's assertion of a theory known as the natural forces of labor ("NFOL") that claims "natural forces" in labor, rather than the midwife's aggressive conduct, injured Levi. Abruptly, shortly before trial, the trial court changed its mind and permitted Hamilton to pursue such a defense.

The trial court erred in allowing such a medically unsupported defense theory by not properly conducting a *Frye* analysis of such a novel and extreme scientific theory that has not gained general acceptance in the medical community. The trial court then compounded this error in abusing its discretion by allowing Alan Tencer, Ph.D., a notorious expert witness, to give an expert opinion under ER 702 that was essentially a medical opinion he was not qualified to render.

Levi was thereby deprived of a fair trial on the injuries he experienced at Hamilton's hand. This Court should reverse the judgment on the jury's adverse verdict and remand the case to King County, the proper venue for this case, for trial.

II. ASSIGNMENTS OF ERROR

Assignments of Error

1. The trial court erred when it allowed Hamilton to present her theory that natural forces of labor caused Levi's brachial plexus avulsion/ rupture injuries, even though the trial court acknowledged that no medical literature exists that an avulsion injury can occur due to the natural forces of labor.

2. The trial court erred when it allowed Alan Tencer, Ph.D., to testify regarding the forces occurring during labor, when no medical literature exists regarding the force required to avulse the brachial plexus nerve of a newborn baby.

3. The trial court erred when it changed venue from King County to Lewis County.

4. The trial court erred when it excluded Levi's treating doctor from testifying as to causation.

Issues Pertaining to Assignment of Error

1. Where the natural forces of labor theory of causation has not gained general acceptance in the pertinent scientific community, did the trial court err in its conduct of the *Frye* analysis for novel scientific evidence, particularly where it abruptly changed its earlier rejection of

such a theory, and where it inappropriately permitted new evidence on natural forces of labor shortly before trial on reconsideration?

(Assignment of Errors Numbers 1)

2. Did the trial court abuse its discretion in admitting the testimony of Alan Tencer, Ph.D. on NFOL-related issues where the relevant scientific community for assessing the propriety of NFOL is the medical community, and Dr. Tencer is not qualified under ER 702 to render a medical opinion in this context? (Assignment of Errors Numbers 2)

3. Did the trial court err in transferring venue from King County to Lewis County? (Assignment of Errors Numbers 3).

4. Did the trial court abuse its discretion when it precluded Levi's treating surgeon from testifying as to the cause of Levi's injuries? (Assignment of Errors Numbers 4).

III. STATEMENT OF THE CASE

On April 4, 2010, Levi Myhre was born with a motionless right arm at respondent Laura Hamilton's home birthing center in Chehalis, Washington. Hamilton acted as midwife for Levi's birth, and a family member video recorded his birth. Shortly thereafter, Levi was diagnosed with damage to all five right brachial plexus nerve roots where the nerve attached to the spinal cord. CP 1552 – 1553; 1640. The brachial plexus

nerve enervates the hands, arms and shoulders. In August, 2010, at Seattle Children's Hospital, Dr. Raymond Tse attempted surgical repair of Levi's brachial plexus nerve. Dr. Tse found rupture of the nerve roots at the C5 and C6 vertebrae, avulsion of the nerve root at the C7 vertebrae, and partial avulsion of the C8 and T1 nerves. CP 1640. Levi has no functional use of his upper right arm, limited use of his right forearm, and impairment of his hand. He also suffers sensory loss, and pain. CP 1665 – 1668; 1671.

Levi's expert obstetrician/gynecologist, Dr. Howard Mandel, reviewed the records and the video recording. He testified that shoulder dystocia occurred during delivery, where Levi's right shoulder stuck on mother's pubic bone. In order for the baby's head to be delivered, the baby's shoulders must be perpendicular to the widest part of the mother's pelvis. Then, for the shoulders to be delivered the baby must turn so that the shoulders are parallel with the widest part of the mother's pelvis. If the baby does not turn, his shoulder can become hung up on the mother's public bone and he does not continue to down the birth canal. While the baby's shoulder is caught, the mother's contractions continue to push the baby. This is called shoulder dystocia and is a medical emergency requiring immediate, appropriate intervention by the attending health care provider. CP 1670.

Dr. Mandel observed that “the midwife inserted her hands around the baby’s neck in an apparent effort to manually turn the baby, and about 20 seconds later, she applied lateral (downward) manual traction of Levi’s head and neck in her delivery process.” CP 1642. Dr. Mandell testified that the placement of Hamilton’s hands was improper and has “long been associated with excessive lateral and downward vector forces that can and do result in brachial plexus injury. In this case Levi’s 5 brachial plexus nerve roots were not merely ‘stretched’ they were ‘avulsed’ (ripped out of their sockets) or ‘ruptured’ (ripped apart).” CP 1642. Midwife Hamilton’s treatment fell below the standard of care. CP 1640.

Dr. Mandell also testified that the extensive damage to all five of Levi’s brachial plexus nerve roots could only be caused by excessive traction. No medical data or literature reports “of such a serious brachial plexus neurological injury occurred without excessive manual traction by the delivering provider.” CP 1640 – 1641.

Levi’s midwife expert, Pamela Kelly, RN, CNM, testified that Hamilton encountered shoulder dystocia and failed to use the recognized shoulder dystocia maneuvers to release the shoulder. Instead, Kelly observed from the video that Hamilton pulled “on the neck and anterior shoulder to free it from under the pubic bone. The mother pushes simultaneously which further impacts the shoulder behind the pubic bone,

so the midwife pulls even harder.” CP 1654 – 1656. Ms. Kelly also knows of no medical literature that “avulsion and ruptures of the brachial plexus nerve roots of an otherwise normal newborn can occur by way of the natural forces of labor (uterine contractions and maternal pushing).”

Dr. Stephen T. Glass, Levi’s pediatric neurology expert, reviewed the video of Levi’s birth and observed “lateral (downward) distraction of the head and neck are utilized in the process of delivery efforts.”

Subsequently, “stronger pulling efforts are noted by delivering hands . . .”

CP 1665 – 1668. Dr. Glass testified that: “Given the character of delivery and given the degree and extent of this severe plexus injury, it is improbable that the ‘natural forces’ of labor and delivery were solely responsible . . .” CP 1665 – 1668. In fact, Dr. Glass testified that excessive lateral or rotational traction manually applied to Levi’s head was the “only way” this injury could have occurred. CP 1672.

The case below was filed in King County Superior Court on January 27, 2014, against Hamilton, Joint Underwriters Association of Washington (JUA), and Midwifery Support Services, LLC. JUA and Midwifery Support Services were dismissed on summary judgment on August 1, 2014. With Hamilton as the only remaining defendant, the court granted her motion to change venue to Lewis County on September 2, 2014. The court set a trial date of October 19, 2015.

On August 18, 2015, Levi filed his motion to exclude evidence that the natural forces of labor could cause Levi's injury. After reading the materials submitted by both parties and hearing oral argument, the trial court granted the Levi's motion. The court found: "The evidence that we have from the defense is not specific enough to this type of injury because it just includes temporary and permanent, and whether it's a stretch, whether it's a rupture, whether it's an avulsion, whether it's a neuroma we don't really know." VRP, 09/18/15, at 19.

Levi filed his motion for partial summary judgment of negligence and causation on September 15, 2015. CP 1621.

On October 1, 2015, Hamilton filed a motion for reconsideration. In support of the motion for reconsideration, Hamilton submitted six new expert declarations, all dated after the court's September 18, 2015, ruling: Beth Coyote, L.M., dated September 24, 2015; Dolly Browder, L.M., dated September 25, 2015; Elizabeth Sanford, M.D., dated September 23, 2015; Robert K. DeMott, dated September 29, 2015; Thomas Collins, M.D., dated September 28, 2015; and Alan Tencer, Ph.D., dated September 24, 2015. CP 2933.

The trial court granted the motion on October 12, 2015, just seven days before trial. In granting the motion for reconsideration, the trial court determined first that "it would be substantially unfair to the defense to

restrict them to testimony that said basically she did not violate the standard of care, she met the standard of care, and then on cross-examination to that witness, well, if she didn't how did this happen and then they can't say, well, it wasn't traction and then the jury's going to just be left with that void." VRP, 10/12/15, at 27. The trial court also determined that, although the medical literature does not state that an avulsion can be caused by the natural forces of labor, literature exists that a permanent injury can be caused by natural forces of labor. VRP, 10/12/15, at 27 – 28. Finally, the trial court stated that, because the forces acting on an infant's brachial plexus nerve cannot be studied prospectively based upon ethical considerations: "You can't get in there and manipulate and do those things to say, oh, that's how much it took, that's how much pressure it took." VRP, 10/12/15, at 29.

So both you have argued this, and the court in Texas pointed the same thing out, they said there's no medical literature that specifically contributes permanent avulsion injuries to natural forces. Again, that's what we have, that ethical problem. That's not a test that you can actually do. At the same time, there's no medical literature that specifically says that the permanent avulsion injuries can only occur by the application of excess lateral traction to the head of the child.

Id. at 29 – 30.

Thus, even though the trial court concluded that no medical literature exists that a brachial plexus avulsion can occur because of the

natural forces of labor, the trial court allowed the evidence. Because the issue of how much force is required to avulse the nerve of a newborn baby cannot be tested, the trial court allowed evidence that other brachial plexus injuries might occur. In other words, the trial court reasoned that, because there is no methodology, much less a generally accepted methodology, that provides scientific support for the natural forces of labor defense, Hamilton should be allowed to present her defense. The appellant asks this Court to reverse this ruling.

IV. SUMMARY OF ARGUMENT

The trial court erred in admitting novel scientific evidence on NFOL without conducting a proper Frye analysis. NFOL has not gained general acceptance in the medical community. The trial court's decision was particularly prejudicial to Levi where that court reversed its previous conclusion such evidence was inadmissible shortly before trial, and abusing its discretion by admitting six expert declarations on reconsideration of that earlier exclusionary ruling.

Compounding its error on NFOL admissibility, the trial court allowed an expert on biomechanical forces to offer an improper expert medical opinion on NFOL when he was unqualified to do so under ER 702. The trial court also abused its discretion in excluding the testimony of Levi's treating surgeon on causation.

The trial court abused its discretion in transferring venue in this case from King to Lewis County, where Levi could not get a fair trial.

V. ARGUMENT.

1. The Trial Court Erred When It Allowed the Natural Forces of Labor Evidence One Week Before Trial When The Theory Is Not Generally Accepted In The Scientific Community

a. Expert testimony must satisfy both the Frye rule and the requirements of ER 702.

If an expert's opinion is based upon a scientific theory or method, the theory or method should be one that is generally accepted in the scientific community. *Frye v. U.S.*, 293 F. 1013 (App. D.C. 1923); *Moore v. Harley-Davidson Motor Co. Group, Inc.*, 158 Wn. App. 407, 241 P.3d 808 (2010). ER 702. Washington courts apply the *Frye* test. *Anderson v. Akzo Nobel Coatings, Inc.*, 172 Wn.2d 593 (2011). Expert testimony is admissible under *Frye* where “(1) the scientific theory or principle upon which the evidence is based has gained general acceptance in the relevant scientific community of which it is a part; and (2) there are generally accepted methods of applying the theory or principle in a manner capable of producing reliable results.” *Lake Chelan Shores Homeowners Ass'n v. St. Paul Fire & Marine Ins. Co.*, 176 Wn.App. 168, 175 (2013), *review denied*, 179 Wn.2d 1019 (2014). The standard does not require unanimity. *Id.* at 176. But such evidence is inadmissible under *Frye* if, as here, there is a significant dispute among qualified scientists in the relevant scientific community. *Anderson*, at 603; *State v. Gregory*, 158 Wn.2d 759, 829 (2006); *State v. Cauthron*, 120 Wn.2d 879, 887 (1993); *Eakins v. Huber*,

154 Wn.App. 592, 599 (2010). A court's decision to admit scientific evidence under the *Frye* standard is reviewed de novo. *Lakey v. Puget Sound Energy, Inc.*, 176 Wn. 2d 909, 919, 296 P.3d 838 (2013). Hamilton's expert opinions did not satisfy the *Frye* rule, and the trial court erred in allowing the opinions.

Furthermore, expert witnesses may not engage in conjecture or speculation. ER 702. "The *Frye* inquiry is separate and distinct from the admissibility question applied to all evidence—whether there is a proper foundation—to determine whether the accepted methods were appropriately employed in a particular case." *Muhammed v. Fitzpatrick*, 91 A.D.3d 1353, 937 N.Y.S.2d 519, 521 (4th Dept. 2012). The Court "must find that there is an adequate foundation so that an opinion is not mere speculation, conjecture, or misleading." *Johnston-Forbes v. Matsunaga*, 181 Wn.2d 346, 357 (2014). (emphasis added). This is a "case-by-case ... inquiry The trial court must perform a new fact-specific inquiry concerning the admissibility of an expert in every given case." *Id.* at 357-58 (emphasis added); *Stedman v. Cooper*, 172 Wn.App. 9, 18 (2012); *Fabrique v. Choice Hotels Int'l, Inc.*, 144 Wn.App. 675, 687-88 (2008) ("Importantly, medical testimony must be based on the facts of the case and not on speculation or conjecture."). The Court must keep in mind "the danger that the jury may be overly impressed with a witness possessing the aura of an expert." *Stedman*, at 19.

Hamilton's experts did not rely on a generally accepted methodology for their conclusions. The medical literature relied upon by

Hamilton and her experts reviewed below reveals that there is not a single reported case of an avulsion injury or avulsion/rupture at all five levels of the brachial plexus attributed to the natural forces of labor. Moreover, as the trial court pointed out, prospective testing cannot ethically be done. VPR 09/18/15, at 19 – 20. It is not possible to stretch the brachial plexus nerve of a live newborn until it snaps. Thus, the medical community has attempted other tests, but none of these tests are generally accepted in the scientific community.

Even if the Court agreed that the methodologies relied upon by Hamilton and her experts is generally accepted in the medical community, the medical research does not connect injuries allegedly caused by the natural forces of labor to the injury sustained by Levi Myhre to all five levels of his brachial plexus nerve. None of the injuries described in the medical literature reaches the level as those suffered by Levi. The foundational requirements of ER 702 cannot be met, and the evidence should have been excluded.

b. There is no general acceptance in the medical community that maternal forces can cause an avulsion or rupture/ avulsion of the brachial plexus nerve at all five levels.

The trial court erred when it allowed Hamilton's expert opinions that the "NFOL" caused Levi Myhre's injuries, because it is not generally accepted with the medical community that an avulsion of the brachial plexus nerve can be caused by the NFOL. If an expert's opinion is based

upon a scientific theory or method, the theory or method should be one that is generally accepted in the scientific community. *Frye v. U.S.*, 293 F. 1013 (App. D.C. 1923); *Moore v. Harley-Davidson Motor Co. Group, Inc.*, 158 Wn. App. 407, 241 P.3d 808 (2010). ER 702. In Washington, expert testimony is only admissible under *Frye*.

The Court exercises its gatekeeping function by analyzing the reliability of Hamilton's expert testimony "in the context of the specific **facts**" in this case. *Johnston-Forbes*, 181 Wn.2d at 354 (emphasis added). In order to admit Hamilton's "NFOL" hypothesis on causation in this case, the court must "scrutinize" each "expert's underlying information and determine whether it is sufficient to form an opinion on the relevant issue." *Id.* at 357. A court that admits expert testimony unsupported by an adequate foundation abuses its discretion. *State v. Phillips*, 123 Wn.App. 761, 765, 98 P.3d 838 (Div.II 2004). Expert medical testimony must meet the standard of reasonable medical certainty or reasonable medical probability. *Anderson v. Akzo Nobel Coatings, Inc.*, 172 Wn.2d 593, 260 P.3d 857 (2011).

The trial court in this case acknowledged that there is no medical literature that avulsions can be caused by the NFOL. In addition, courts in other jurisdictions, that require scientific evidence to comply with the *Frye*

standard, have excluded evidence that brachial plexus ruptures and avulsions can be caused by the natural forces of labor. *Nobre ex rel. Ferraro v. Shanahan*, 42 Msc. 3d 909 (NY: Sup. Ct. 2013); *Muhammed v. Fitzpatrick*, 91 A.D. 3d 1353, 1354 (NY: 2012).

Even Hamilton's expert testified that the medical literature does not support the opinion that the NFOL can cause an avulsion injury. Dr. Sanford testified at her deposition that the literature "is still not very good in terms of telling us exactly what happens to cause" brachial plexus injury. CP 1467. She also testified: "I don't have anything in the literature that specifically – that I recall talks about [a]vulsion versus anything stretching . . . the medical literature does not really specifically state one way or another and more research is needed in whether [a]vulsion is any different than just a stretching or any type of thing that would cause a permanent injury." CP 1468. She was not aware of any medical literature that attribute an avulsion injury from the natural forces of labor. CP 1469.

A review of the literature submitted by Hamilton confirms the trial court's finding that no medical literature supports Hamilton's defense that natural forces of labor can cause an avulsion of the brachial plexus nerve. The articles may support an assertion that injuries may occur to the

brachial plexus nerve from the NFOL, but none describe a single avulsion injury caused solely by the NFOL.

The publication relied upon most by Hamilton is *Neonatal Brachial Plexus Palsy*, published by the *American College of Obstetricians and Gynecologists* (ACOG) in 2014. CP 1867-1987. In the chapter entitled “Pathophysiology and Causation,” the authors state: “There is some evidence that the cardinal movements of labor alone may cause stretch in the brachial plexus (2), ***but the extent of this stretch requires more investigation.*** CP 1916. The authors further state: “Because of the nonlinear behavior of tissues such as nerve tissue, ***an estimate of the force needed to cause a nerve rupture cannot be directly established.***” CP 1917.

The textbook, *Williams Obstetrics*, also relied upon by Hamilton, states that “severe plexopathy may also occur without risk factors or shoulder dystocia. (Torki, 2012).” CP 1999. However, the Torki study cited by the textbook does no analysis and provides no description of the “severe brachial plexus palsies” the authors claim to have studied. CP 539-541. The authors of the Torki study do not document a rupture or avulsion injury. They reference only vaguely “severe brachial plexus palsies.” CP 2032; 2034.

Similarly, case reports relied upon by Hamilton do not describe avulsion injuries or cases where the brachial plexus nerves were ruptured or avulsed at all five levels. A case of Erb's palsy, which is injury to the nerve at C5-C6, is described in "Permanent brachial plexus injury following vaginal delivery without physician traction or shoulder dystocia," *American Journal of Obstetrics & Gynecology*, March, 2008. CP 2009-2010. Another study documents 49 permanent brachial plexus injuries, 46 Erb palsies and three Klumpke palsies, which is injury to the nerve at C8-T1. CP 2012- 2016. This article does not describe a single avulsion injury or rupture/avulsion injuries at all five levels, nor does it analyze the causes of the injuries, whether occurring naturally or due to traction provided by the medical provider. These authors conclude: "Further studies, including comparison of neurosurgical findings with obstetric antecedents and **development of a tool to gauge excessive downward traction**, are urgently needed." CP 2016.

A 1999 article describes Erb and Klumpke palsies, but not a single avulsion or rupture/avulsion injury to all five nerve roots. CP 2018. Furthermore, the authors of this article find that "shoulder dyscias attended by either a midwife, nurse, corpsman, or osteopath are at 3- to 4-fold increased risk of neonatal brachial plexus injury." CP 2018. The article concludes by reiterating that "there is no *currently accepted*

method to objective quantify ‘excessive’ lateral traction.” CP 2021. The trial court erred when it ruled that it is generally accepted that the natural forces of labor can cause an avulsion injury or rupture/avulsion injuries at all five levels. CP 2021.

Hamilton submitted an abstract, not even the entire article, which describes Erb palsy in newborns. CP 2024. Certainly, an abstract should not be considered by the court or by an expert, because a comparison of the cases referenced in the abstract with Levi’s case is not possible. However, the abstract describes Erb palsy, which is not the injury suffered by Levi Myhre. This abstract does not provide support for the notion that avulsion injuries can occur due to the natural forces of labor.

Dr. DeMott, Hamilton’s expert, co-authored a “nonsystematic literature review,” entitled “Controversies surrounding the causes of brachial plexus injury.” CP 2026-2030. This article asserts that the incidence of brachial plexus injuries have not declined over the years, in spite of shoulder dystocia training. Therefore, the authors conclude that traction by medical providers cannot be the cause of brachial plexus injuries. CP 2029. The article does not analyze the severity of injuries, nor does it discuss actual cases or case studies involving rupture or avulsion. The entire logical sequence of the article includes only the total incidence of brachial plexus injuries compared to training provided to

medical providers to respond to shoulder dystocia. Not only is the conclusion a logical fallacy, because it fails to take into account all causes of brachial plexus injuries, but the authors admit that, by making a “nonsystematic literature review,” they are using no methodology at all, much less one that is generally accepted in the medical community.

The only discussion of rupture or avulsion in Dr. DeMott’s article is contained in section 8, where the authors assert without any citation to any study or medical literature that “the threshold for nerve rupture and avulsion must be very close for each, as the random occurrence for rupture and avulsion would indicate.” CP 2029. There is no scientific or medical evidence that rupture and avulsion of the brachial plexus nerves are “random” occurrences in newborns. Nor is there scientific evidence determining the threshold or nerve rupture avulsion. A completely unsupported assertion in a nonsystematic literature review cannot be mistaken for general acceptance in the scientific community.

Hamilton and her experts also relied on “Causes of Neonatal Brachial Plexus Palsy,” by Daniel T. Alfonso, M.D., Bulletin of the NYU Hospital for Joint Diseases, 2011: 69(1):11-6. CP 2036-2041. Dr. Alfonso writes directly about the lack of general consensus in the medical community:

“The literature on predisposing factors for obstetrical brachial plexus palsy suffers from ***lack of precision, conflicting findings, and lack of correlation*** between the alleged predisposing factors and obstetrical brachial plexus palsy. Most articles equate neonatal brachial plexus palsy with obstetrical brachial plexus palsy, ***demonstrating a lack of precision in the literature.***”

CP 2037.

Dr. Alfonso unequivocally states that the traction by the caregiver is necessary to produce obstetrical brachial plexus palsy: “. . .the magnitude, acceleration, and direction of the vector of the stretch force is *the product of the sum of the traction force generated by the obstetrician and the propulsive force generated by spontaneous or induced uterine contractions.*” CP 2038. The exact contribution of each force ***is unknown.*** CP 2039.

If the articles are looked at as a whole, two more issues arise that cast doubt on the methodology used by the authors. First, the proponents of the “natural forces of labor theory” appear to be the same small group of doctors: Drs. Ouzounian, Sandmire, DeMott, and Gherman have written several of the articles relied upon by Hamilton and her experts. CP 1848-49. Dr. Gherman was chair of the Task Force on Neonatal Brachial Plexus Palsy that authored the ACOG publication, and Drs. Gherman and Ouzounian were on the committee. CP 1875; 1878.

Other doctors have disagreed with the methodologies or conclusions of the articles relied upon by Hamilton. CP 1516.

Gurewitsch and associates believe that the scientific foundation for etiologies of BPP other than excessive traction is questionable. The maternal propulsive-force theory as a cause of BPP [brachial plexus palsy] is challenged as a subjective interpretation of retrospective data, independent of whether shoulder dystocia was recorded and whether the injury was temporary or permanent.

Gurewitsch and colleagues state that evidence from 2 research studies shows that maternal forces and in utero positioning are normally insufficient to cause injury and that the most common cause of permanent injury is the application of traction laterally, torsionally, or in combination. Gurewitsch et al state that there is not sufficient evidence to support other theories that permanent injury comes from anything other than excessive traction.

CP 2051. (Madonna Sacco, B.S., J.D., “Brachial Plexus Injury Causation In Newborns Debated”, *Contemporary OB/GYN* (May 1, 2010)).

...[T]he claim that avulsion or rupture might be due to “endogenous “ factors expulsive uterine forces and maternal pushing) capable of overstretching the brachial plexus is unsubstantiated. . . . [T]here is not even a single case report of permanent injury due to rupture or avulsion in the absence of traction having been applied. In addition our pediatric colleagues in neurology, orthopedics, and neurosurgery who evaluate and treat BPI recognize that avulsion or rupture results from excessive stretching of the brachial plexus by abduction (lateral traction).

CP 1462; 1643, par. 15 (Kreitzer, *Shoulder Dystocia and Birth Injury – Prevention and Treatment 202* (3d ed. Humana Press 2010.)).

Furthermore, courts have excluded the natural forces of labor defense. *Nobre ex rel. Ferraro v. Shanahan*, 42 Msc. 3d 909 (NY: Sup. Ct. 2013); *Muhammed v. Fitzpatrick*, 91 A.D. 3d 1353, 1354 (NY: 2012.

• The second issue apparent with the articles relied upon by Hamilton is that the studies examine the results of brachial plexus injuries,

that is, whether the infant suffered from a “transient” or permanent brachial plexus palsy. CP 1852; 1856; 1860; 1884; 1990; 1993; 1996; 1999; 2009; 2012; 1303; 2024; 2026; 2032; and 2036. The articles describe the symptoms experienced by the child, such as paralysis or weakness, and how long the symptoms persisted. They do not discuss whether the symptoms are the result of stretch, rupture, or avulsion, which was pointed out by the trial court in its original ruling excluding the evidence.

Thus, Hamilton’s experts extrapolated studies of symptoms, without regard to the actual injury, to the present case where the nature of the actual injury is documented and photographed as C5-C6 nerve root rupture, C7 nerve root avulsion and C8 and T1 partial nerve root avulsion. CP 1667. This apples-to-oranges methodology is not generally accepted in the scientific community, and the trial court erred when it allowed the evidence.

The trial court erred when it admitted the natural forces of labor theory without a *Frye* hearing and on reconsideration only one week before trial. A *Frye* hearing would have exposed what the trial court already acknowledged – that there is no medical evidence in any article or study that an avulsion injury can occur from the natural forces of labor alone. Without general acceptance in the scientific community, defense

experts had only their alleged knowledge and experience to rely upon that such an injury could occur from the natural forces of labor alone. It was error for the trial court to admit such testimony. Washington courts reasoned that:

. . . [I]t makes little sense to conclude that an expert could avoid the application of *Frye* simply by eschewing the use of any particular methodology or technique and purporting to rely only on their knowledge and experience.

Lake Chelan Shores Homeowners Ass'n. v. St. Paul Fire & Marine Ins. Co., 176 Wn.App. 168, 181, 313 P.3d 408 (2013).

The Court should consider the substantial prejudice to Levi, when the trial court reversed itself one week before trial on a motion for reconsideration based upon six entirely new expert declarations. CP 2933. The Court may consider prejudice to a party when new evidence is considered in a motion for reconsideration. *Martini v. Post*, 178 Wn. App. 153, 162, 313 P.3d 473 (Div. II 2013).

In sum, the trial Court erred in conducting its *Frye* analysis. NFOL is not generally accepted in the medical community. This Court should reverse the trial court's decision and rule the NFOL evidence inadmissible.

2. Expert opinion based upon so-called measured forces is not admissible under *Frye* or ER 702.

The trial court erred when it allowed Hamilton's experts,

particularly, Alan Tencer, Ph.D., to quantify the forces present during labor and opine whether those forces were sufficient to cause the rupture and avulsion of Levi Myhre's brachial plexus nerve at all five levels. Hamilton's experts testified as if the forces present during labor, the force applied by the medical provider, and the forces required to rupture or avulse the brachial plexus nerve in a newborn human are well known and well understood. The literature relied upon by Hamilton's own experts shows that this assumption is false and misleading to the jury.

Tencer's testimony did not meet the threshold for the admission of expert testimony. Tencer, a biomechanical engineer, who typically testifies in motor vehicle accident claims,¹²³⁴⁵ testified regarding the "endogenous" forces (forces produced by the mother's contractions), the "exogenous" forces (forces placed on the infant by the medical care provider), and the force required to injure the infant's nerve. The trial court erred when it allowed Tencer's testimony and opened the door for Hamilton's other experts to rely upon it. Tencer's opinions were speculative and misleading and should have been excluded.

¹ *Johnston-Forbes v. Matsunaga*, 181 Wn.2d 346, 333 P.3d 388 (2014)

² *Berryman v. Metcalf*, 177 Wn.App 644, 312 P.3d 745 (Div. II 2012)

³ *State v. Briejer*, 172 Wn.App 209, 289 P.3d 698 (Div. I 2013)

⁴ *Stedman v. Cooper*, 172 Wn.App 9, 292 P.3d 764 (Div. I 2012)

⁵ *Ma'Ele v. Arrington*, 111 Wn.App 557, 45 P.3d 557 (Div. II 2002)

First, Tencer is not qualified to testify regarding the forces present at the birth of a child. ER 702. He has no specialized training in birth injuries, the mechanics of childbirth, or the methods of responding to should dystocia. CP 2372-2378. Tencer makes the giant logical leap that he is qualified as a biomechanical engineer to testify regarding brachial plexus injuries in newborns, just because other biomechanical engineers, such as Dr. Michelle Grimm, might be so qualified. CP 2373. There is no basis in law or science for this leap.

Dr. Tencer's professional experience has been as professor in the orthopedics department at the University of Washington. CP 2372. That he can read a professional paper on brachial plexus injuries does not qualify him as an expert. CP 2373; 2375. That his testimony was previously admitted in a medical malpractice case involving an orthopedic injury does not qualify him as an expert in a medical malpractice case involving injuries of child birth. CP 2376.

Justice Mary Yu, in her concurring opinion, cautioned that the admission of expert testimony must be on a case-by-case basis. *Johnston-Forbes v. Matsunaga*, 181 Wn. 2d 346, 358 (2014). One court decision admitting biomechanical engineering expert opinion is not an endorsement of such evidence in all other cases. *Id.* See also, *Stedman v. Cooper*, 172 Wn. App. 9, 10-11, 292 P.3d 764 (2012).

Moreover, Tencer is not qualified to offer medical expert testimony. Although he describes his opinions as biomechanical testimony, his underlying message is that Levi's injury occurred from the natural forces of labor and not from the force applied by Hamilton. In fact, even when he is allowed to testify, he has been *precluded* from giving an expert *medical* opinion. *Johnston-Forbes*, 181 Wn.2d at 350, 351. Our courts have noted this underlying message:

Emphasizing that he testified from a biomechanical rather than a medical perspective, he disavowed any intention of giving an opinion about whether Stedman was hurt in the accident. Nevertheless, *his clear message* was that Stedman could not have been injured in the accident because the force of the impact was too small.

Stedman, 172 Wn.App. at 14.

Like the Court in *Stedman*, this Court should rule that Tencer's testimony was essentially a medical opinion on causation that Tencer is not qualified to make.

Second, Tencer's methods of supposedly calculating the natural forces of labor are unreliable. Washington courts have excluded expert testimony, because it was unreliable and failed to meet the helpfulness requirement of ER 702. *Lakey v. Puget Sound Energy, Inc.*, 176 Wn.2d 909, 920-921, 296 P.3d 860 (2013). In *Lakey*, the Court noted that the expert failed to consider all relevant data and discounted entire studies.

He also selectively sampled data to support his opinion. The Washington Supreme Court found that the expert “created a false impression about what the study actually showed.” *Id.* This Court should make a similar determination regarding Tencer’s testimony.

The Court of Appeals reviewed cases from other states in *Stedman*, before ruling that the trial court did not abuse its discretion when it excluded Tencer’s biomechanical opinions. The Court noted that such testimony has been excluded because the sample size relied upon was too small. There was no proof that experiments were conducted under circumstances substantially similar to the case before the court. The testimony “is speculative, is founded upon assumptions lacking a sufficient factual basis, relies upon dissimilar tests, and contains too many disregarded variables.” *Stedman*, 172 Wn.App. at 12 (Citations omitted.). In the present case, Tencer’s testimony suffers from similar deficiencies, and the trial court erred in admitting it. *See also, Moore v. Harley-Davidson Motor Co. Grp.*, 158 Wn. App. 407, 422, 241 P.3d 808 (2010).

Tencer misled the trial court by implying that it is well established how much force is placed on an infant by endogenous (from the mother) or exogenous (from the practitioner) sources. He bases his conclusions on one study contained in the work of Dr. Michelle Grimm, who has performed simulation studies, as well as reviewed other studies of nerves.

CP 2373-2374; 1911-1912.

Tencer stated in paragraph 5(e) of his declaration:

The exogenous force depends on the person, physician or midwife, assisting the delivery. It is a tensile force applied through the head and neck. Direct measurements have been made both in the delivery room and using simulators by biomechanical engineers. Exogenous forces ranged to about 100N (newton) in actual births and up to 250N during simulations although most clinicians applied less than 150N during delivery.

CP 2375.

However, upon closer reading of Tencer's source, it becomes obvious that little is actually known about the force used by "most practitioners." The 100 N cited by Tencer was based upon single study which included a total sample of two shoulder dystocia cases delivered by one physician. CP 3193. Furthermore, the 100 N was the "mean peak delivery force." CP 3193. Because a "mean" is an average, there is no way to determine the actual peak force used by the one physician in those two instances.

Tencer stated that "most clinicians applied less than 150 N during delivery," implying that this number is true across all studies. However, the 150 N was the result of a single study using a training mannequin in which 113 deliveries were simulated by clinicians, who knew they were being evaluated after training. CP 3195. Of those 113 simulated deliveries, "most clinicians used less than 150 N." Even in that study,

measured forces as high as 254 N were reported, and 28% of the clinicians used force in excess of 150 N. One of the authors of the ACOG publication, relied upon heavily by Hamilton, stated, with regard to this study, that: “Although these studies do not directly match the clinical environment, they do give insight into clinician behavior at delivery.” CP 3195. The trial court erred when it equated insight with generally accepted medical science.

Tencer’s testimony that “most” clinicians use less than 150 N of force was intended to mislead the jury that less than 150 N was applied in this case. This is the logical fallacy of the hasty generalization, which “. . . the key error is to overestimate the strength of an argument that is based on too small a sample for the implied confidence level or error margin.” CP 3198. Fallacious reasoning should not be admitted as generally accepted medical science.

In paragraph 5(f) of his declaration, Tencer testified, perhaps falsely, that endogenous forces are always greater than exogenous forces, hoping to mislead the jury to conclude that exogenous force will never be great enough to cause injury or that the forces are not additive, as described by Dr. Alfonso. CP 2375. Again, the entire article cited by Tencer must be read, not merely the abstract, which is only part he references. CP 2300. In the article, Dr. Grimm, the author, concludes:

“Obviously, the mathematical exercise presented here *can only crudely examine* this complex issue of forces and pressures related to the shoulder dystocia event.” CP 3200.

Tencer testified in paragraph 5(g) of his declaration: “The force required to fracture a clavicle or other bone is greater than the force required to rupture a nerve or avulse a nerve root from the spinal cord. This is based on research I performed as well as generally accepted biomechanical research.” CP 2376. This statement is false, as shown in Dr. Grimm’s own work.

Dr. Grimm states in her chapter on pathophysiology and causation for the American Congress of Obstetricians and Gynecologists that: “Because of the nonlinear behavior of tissues, such as nerve tissue, *an estimate of the force needed to cause a nerve rupture cannot be directly established.*” CP 3202. (Emphasis added.) She also states: “*The nerve tissue properties of the newborn brachial plexus have not been adequately studied to establish thresholds for damage based on either applied force or resulting stretch.*” CP 3202. Most importantly, Dr. Grimm states that “the fact that 200 N of force could be applied to a fetus to effect delivery in the absence of clinical shoulder dystocia *does not establish a permissible or ‘safe’ traction force* in the presence of shoulder impaction with the maternal pelvis. CP 3202.

Similarly, in Dr. Grimm's article detailing the mathematical modeling of forces, also cited by Tencer, she states: "Additionally, ***there are no data*** to quantify the threshold pressures needed to induce traction versus compression related nerve injury." CP 3204. Not only was Tencer's testimony regarding the force required to cause a nerve injury not generally accepted medical science, his testimony was contrary to generally accepted medical science.

The use of computer models and animal studies to establish causation in brachial plexus cases has been rejected by the courts in *Nobre* and *Mohammed*. *Nobre ex rel. Ferraro v. Shanahan*, 42 Msc. 3d 909 (NY: Sup. Ct. 2013); *Muhammed v. Fitzpatrick*, 91 A.D.3d 1353, 937 N.Y.S.2d 519, 521 (4th Dept. 2012). The court in *Nobre* found that data and underlying support for the "natural forces of labor" defense "has not reached a sufficient point of reliability" with respect to causation. CP 2976. The court noted that correlation from animal studies to human infants is speculative. CP 2976. The computer models had not been applied to the particular birth in *Nobre*. CP 2977.

Likewise, in the present case, no attempt was made to calculate the forces acting on Levi's body. Although Tencer testified that the endogenous forces acting on the infant during labor can be calculated, he made no attempt to make the calculations for Levi Myhre. CP 2374. No

attempt was made to calculate the force applied by Hamilton.

The trial court abused its discretion when it allowed Tencer to quantify the forces acting on Levi by the mother's contractions and by Hamilton's pulling on him. He is not qualified to render an opinion; his expertise is in automobile cases and orthopedics. Tencer's opinions lacked proper foundation. Like the expert in *Lakey*, Tencer cherry-picked the studies in order to form the opinion he was paid to give. Finally, Tencer made no attempt to calculate the forces in the present case.

The trial Court abused its discretion in admitting the expert testimony of Alan Tencer under ER 702. This evidence constituted prejudicial and irreversible error, meriting a new trial.

3. The trial court erred when it granted defense motion to change venue.

The case below was filed on January 27, 2014, in King County against Hamilton, JUA, and Midwifery Support Services, LLC. On March 10, 2014, Hamilton filed a motion for change of venue to Lewis County. The motion was denied on March 19, 2014.

On August 1, 2014, both JUA and Midwifery Support Services were dismissed on summary judgment. Hamilton immediately applied again for a change of venue to Lewis County, and this time, her motion was granted on September 2, 2014.

The trial court erred when it granted the motion for change of venue. RCW 4.12.030(3) requires the court to consider the convenience of witnesses and issues of justice when ruling on a motion for change of venue. Except for Hamilton and Levi's parents, the witnesses and attorneys were either residents of Seattle and King County, or they were from out-of-state and would be flying into SeaTac Airport. CP 19-20. The convenience of witnesses would have been better served by retaining the case in King County.

Further, RCW 4.12.030(2) requires the court to consider whether there is reason to believe that an impartial trial cannot be had. According to the U.S. Census Bureau, Lewis County has a population of just over 75,000. Hamilton testified that she has delivered over 3,000 babies, mostly within Lewis County. Empaneling a jury of 12 people who have had no contact with Hamilton was impossible. VRP Motion Hearing September 25, 2015, p. 13, ln. 2. The trial court abused its discretion, and the Court should reverse.

4. The trial court erred when it excluded Levi's treating doctor's testimony as to causation.

On October 21, 2015, just before Levi's surgeon, Dr. Tse, was about to testify by deposition, the trial court excluded his testimony regarding causation. Dr. Tse is director of the brachial plexus program at

Children's Hospital in Seattle. He performed surgery on Levi's brachial plexus nerves in an attempt to improve his functioning. The testimony excluded by trial court concerned the cause of brachial plexus injury, which Dr. Tse testified was traction. VRP, 10/21/15, at 6 – 7. Dr. Tse stated that he has reviewed articles on the subject and opines that traction is the cause of brachial plexus injuries in children.

The trial court indicated that the evidence was cumulative, given the anticipated testimony of Dr. Glass, Levi's pediatric neurologist. VRP, 10/21/15, 6 – 7. However, Dr. Glass is not a surgeon. He did not try to repair Levi's avulsed and ruptured nerves; Dr. Tse did that. The trial court abused its discretion when it did not allow the treating physician to testify to causation.

VI. CONCLUSION

The Court should reverse the trial court and remand for a new trial. The trial court's rulings allowed Hamilton to present evidence that would not stand up to a *Frye* analysis. The trial court by-passed a reasoned, scientific analysis of the so-called natural forces of labor defense and admitted evidence that not generally accepted in the medical community.

This Court should review de novo the trial court's decision to forego a *Frye* hearing and determine that the trial court should have held

hearing. Levi was deprived of a fair trial based upon generally accepted medicine, and the Court should reverse and remand.

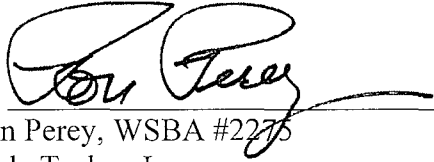
In addition, the Court should rule that the trial court abused its discretion when it admitted the testimony of Dr. Tencer, who is not qualified to testify regarding childbirth, after doing nothing other than reading a few articles. In addition, Tencer's opinions were based upon studies based upon very small samples, and he ignored other studies and did not take into account all the variables in Levi's case. In fact, Tencer did not apply the theories to the facts of Levi's birth. Finally, Tencer's testimony was contrary to the conclusions made by his own source materials.

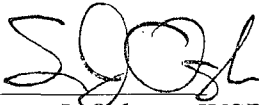
This Court should rule that the trial court abused its discretion when it granted the motion to change venue, when the convenience of the witnesses supported venue in King County. In addition, given Hamilton's prolific midwifery practice in Lewis County, there was reason to believe that Levi would not have an impartial trial in Lewis County.

Finally, the Court should reverse the trial court's decision to exclude the testimony of Levi's treating physician, the only witness who actually saw the damage done to Levi's brachial plexus nerves, as to causation. The trial court erred when it excluded Dr. Tse's causation testimony.

Respectfully submitted this 16th day of May, 2016.

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CERTIFICATE OF SERVICE

The undersigned certifies under the penalty of perjury under the laws of the State of Washington that on the below date, I caused to be served upon the following individuals via the methods indicated:

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I declare under penalty of perjury under the laws of the State of Washington
that the foregoing is true and correct.

DATED May 16, 2016.



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